Ramionics: Formulating and calculating all physics concepts and constants including Fine Structure Constant α, ħ, c, K Coulomb, e, K Boltzmann, Range of dark gravity and Dark Energy, Energy density of space and (mass, charge and structure) of (matter particles and energy particles)
by Ramin Khosravi, 1st July 2025 Last version: http://Ramionics.com

1.Epigraphs: The Mystery of 137

Albert Einstein: "The constant α has the value of about 1/137. Nobody knows why. It seems to be one of the greatest unsolved problems in physics."

Max Planck: "Every dimensionless constant of nature hides a mystery; α is the deepest of them all."

Paul Dirac: "If numbers such as 137 turn out to be pure geometry, physics will finally have reached its foundation."

Enrico Fermi: "No one knows what determines the value of α, and until we do, physics will not be complete."

Niels Bohr: "In the fine-structure constant we meet a number that appears to set the scale of all electromagnetic phenomena."

Hendrik Lorentz: "The fine-structure constant connects the worlds of mechanics, electromagnetism, and quantum theory in a single dimensionless number."

Werner Heisenberg: "When I see the fine-structure constant, I get the feeling that God is telling us: 'You will never understand me completely.'"

Richard Feynman: "You might say the hand of God wrote that number and we don't know how He pushed His pencil."

Wolfgang Pauli: "When I die, my first question to the Devil will be: What is the meaning of the fine-structure constant?"

Max Born: "No theory of the universe should be regarded as complete if it cannot explain the number 1/137."

Ramin: "give me only your desired scaling for space, time and energy units. I calculate all constants in the universe and physics (including fine structure constant) using universe geometry."

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2.Introduction

Ramionics as a new physics defines the **universe** as an FCC lattice (Face-Centered Cubic) of 3 dimensional simple spherical **energy quanta** called **Ramions** (**Rotational Anti Matter and Matter ION**) Any ramion is a packet of pure energy that consists **equal linear/rotational energy** parts (E_{Lr}, E_{Rr}) generating **pressure/torque** (P, T) then **relativity/electricity** then **gravity/electromagnetics** then **strong/weak** nuclear forces.

(1) $E_r = \left\{(E_{Lr} + E_{Rr}) = 2(E_{Lr} = E_{Rr}) = 2\left(\frac{mc^2}{2} = \frac{I\,\omega^2}{2}\right) = m\,c^2 = I\,\omega^2\right\} =$

$2\left\{E_{Lr} = \frac{1}{2}m\,c^2 = PV = \frac{F_{Lr}}{4\pi\,r^2}\frac{4\pi\,r^3}{3} = \frac{1}{3}r.F_{Lr}\right\} = 2\left\{E_{Rr} = \frac{1}{2}I\,\omega^2 = \frac{1}{2}(mr^2)\left(\frac{c^2}{r^2}\right) = \frac{1}{2}m\,c^2 = \frac{1}{2}r \times \left(\frac{mc^2}{r}\right) = \frac{1}{2}r \times F_{Rr} = \frac{1}{2}T = 2E_P\right\}$; E_P: Electrical self potential energy

All elementary particles are formed by collapsing some ramions, distributing their energy onto other ramions and forming a black hole in size of 1 ramion as local (relative) value that can be considered as compressed mass to simplify some calculations but really its nothing: A hole in space without matter, energy, time and space. Ramions have no space to carry extra energy because they are on maximum pressure and c (light speed) so they expand space (and in consequence they expand Time to keep speed and energy unchanged) in a manner that forces and torques are balanced. It means reducing space pressure relatively that generates **gravity and strong nuclear force**. Matter-Energy transformations called **Ramionic reaction** can be calculated and predicted by ramionics preciously. In ramionics black holes are simple but huge neutrino, they distributed their energy into the space to supply needed mass of their starts. **Electrical charges** exactly present torque and rotation $2K_rQ_r^2$=T. the black hole is covered by 12 ramion in same size named as wings. Each ramion carries a charge equal to 1/12 of an electron, and opposite ramion along an axis must have equal charge for torque equilibrium, the six ramion couple (±e/6) can only sustain total charge states of 0, ±1/2 e, ±2/3 e, ±e. electrical field is distributed by indentation of ramions and generate **electromagnetics and weak nuclear force**.

Ramions generate, contains, transport, define, formulate, and Explain any fundamental thing in physics: space, time, compatible Relativity + Gravity + quantum, matter, antimatter and their asymmetry, Time dilation, gravity and dark gravity (so called dark matter) , space energy (so called dark energy) causing space expansion, all elementary forces: gravity (+strong nuclear force), electromagnetic (+weak nuclear force), elementary particles structure geometry, physics constants like fine structure constant or elementary particles mass or electrical charges, black hole, worm hole, entanglement, … **with no** space-time curvature, no singularity, no quantum field, no quantum loop, no mass generator or force or energy carrier particle like bosons, no chromodynamics, no string, no extra dimension, no parallel world.

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Starting point:

(2) $\alpha = \frac{K e^2}{\hbar c}$ =alpha: fine structure constant

Measured values:

(3) $\frac{1}{\alpha} = 137.035999046(\pm 27)$ Cz recoil (Berkeley 2018)

(4) $\frac{1}{\alpha} = 137.035999206(\pm 11)$ Rb recoil (LKB,Paris 2020)

(5) $\frac{1}{\alpha} = 137.035999177(\pm 21)$ CODATA (2022)

;Committee on Data for Science and Technology

Ramionics calculates alpha using universe geometry simply:

(6) $\frac{1}{\alpha} = \pi \gamma^2 2^6 \left(1 - \frac{1}{12\left(0.5+\text{RoundUp}\left(\frac{4}{10} 12\, \pi^2\, 2^6\right)\right)}\right)$

(7) $\gamma = \sqrt[3]{\frac{10}{24\,\varphi}} = 0.8255785095$; Radial freedom from FCC geometry

(8) $\frac{1}{\alpha} = 137.039765071 12\left(1 - \frac{1}{36390}\right)$ =137.03599920783

Above value is accurate value for alpha (accuracy more than experiments)

Sensitivity checking:

$\frac{1}{\alpha} = 137.03599910434$; Using 36389

$\frac{1}{\alpha} = 137.03599920783$; Using 36390; Correct values

$\frac{1}{\alpha} = 137.03599931132$; Using 36391

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3.Geometry of the FCC (Face-Centered Cubic) lattice

3.1 Primary Parameters:

Circle's perimeter to r (radius) ratio= 2π

Circle's area to r^2 ratio= π

sphere's area to r^2 ratio= 4π

sphere's volume to r^3 ratio= $4\pi/3$

3.2 General parameters in crystallography:

Any ramion is tangent to 12 neighbors in a FCC lattice, generating maximum volume occupancy:

(1) $\varphi = \frac{\pi}{3\sqrt{2}} = 0.74048048969$ φ: Volumetric Occupancy

number of ramions in layer n:

(2) $L(n) = 10n^2 + 2$;L(1)=12; L(2)=42; **but L(0)=1** means center.

3.3 Special parameters introduced by ramionics:

The cumulative ramions number up to layer n (including it) is:

(3) $T(n) = (1 \text{ for centre}) + \sum_{k=1}^{n}(10k^2 + 2) = T(n) = 1 + \frac{10n^3+15n^2+11n}{3}$

(4) $\varphi \times (\text{Volume of Sphere by radius as } \gamma n2r) = T(n)\frac{4\pi}{3}r^3$; γ definition

(5) $\rightarrow \gamma = \sqrt[3]{\frac{10}{24\,\varphi}} = \sqrt[3]{\frac{10\sqrt{2}}{8\pi}} = 0.8255785095$ γ: Radial Freedom

(6) $\beta(\text{surface of Sphere by radius as } \gamma n2r) = L(n)\,\pi r^2$; β definition

(7) $\rightarrow \beta = \frac{10}{16\ \gamma'^2} = \frac{10}{16\,(\frac{10\sqrt{2}}{8\pi})^{\frac{2}{3}}} = 0.91698716849$ β:Surface Occupancy

β is calculated for πr^2cosine normalized area (not semi-sphere area: $2\pi r^2$).

Geometrical Parameters are hidden ratios behind the fine-structure and other constants in universe. they have (0.1 … 10) range of effect as a multiplier:

(8) $\pi,\ 2\pi,\ 4\pi,\ \frac{4\pi}{3},\ \gamma = \sqrt[3]{\frac{10\sqrt{2}}{8\pi}};\ \beta = \frac{10}{8(2\gamma^2)};\ \varphi = \frac{10}{8(3\gamma^3)} = \frac{\pi}{3\sqrt{2}},\ 10{,}12$

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4.Particles and Ramionic reactions

Using equation (6) for fine structure constant and (40) for electrical potential energy:

(9) $n_g = [K_n]\,12 \times (0.5 + \text{RoundUp}\,(W_g));\ W_g = \frac{4}{10}12\pi^2 64^g$

n_g: number of ramions in any baryon of generation g. default value of n_g is n1 sown as n

n_1: number of ramions in any B1: baryons of generation one: electrons, up, and down quarks;

K_n: 1 or 5 (different scenarios); $n1 = 36390$ or 181950 ;

W represents the Wing: Any of 12 ramions that cover the hole of particle: micro black hole

64^g : baryon generation factor

So B_1 is made of collapsing $[K_n] \times 36390$ Ramions and its equivalent energy is equal to this count of ramions energy.

(10) $n_g = [K_n]\,12 \times (\frac{W_g}{K_W})$; $K_W = \frac{W_g}{0.5+\text{RoundUp}\,(W_g)}$

$W_0 = 47.374$; $n0 = [K_n]\,12 \times 48.5 = [K_n]\,582$; $K_W = \frac{47.374\ldots}{48.5} = 0.97678559021$

$W_1 = 3031.94$; $n1 = [K_n]\,12 \times 3032.5 = [K_n]\,\mathbf{36390}$; $K_W = \frac{3031.94247\ldots}{3032.5} = 0.99981614906$

K_W and K_Q factors are dependent to g but independent of packet scenario.

(11) $\frac{3\varphi}{\gamma^3}12^2 = \frac{4\pi^2}{10}\ 12^2 = \frac{4}{10}(12\pi)^2$: FCC Golden Number for maximum balance, stability, symmetry and on volume /surface, Energy /Torque for a FCC particle.

(3)

3 possible **packet scenarios** for **ramionic reactions** (of transforming energy to baryon)

$[K_n]$: 5 $[K_p]$: 1

In collapsing layers 1 to 119 **one packets** (of 31 B1) is formed and then transformed to **one** packets (of 7 protons+1 neutrons +7 electrons) until layer 479.

$[K_1]$: 1 $[K_p]$: 5 or 6

In collapsing layers 1 to 119 **five packets** (of 31 B1) are formed and then transformed to $[K_p]$ packets (of 7 protons+1 neutrons +7 electrons) until layer 479.

so $[K_p]$: 6 means an extra packet is produced after layer 119.

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Strong layers against collapsing are the layers that have maximum similarity to ideal sphere so they have most similarity to layer 1 (with 12 ramions) and layer infinity which have $10n^2+2$ ramions (approximately 10 multiplier number), So they are 12×10 = 120 multipliers.
Super strong layers: $120, 480, \dots, 4^k120, \dots$
In Super strong group larger layers are stronger.
Strong layers: other 120 multipliers and 120 factors
1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, 240, 360, 600, …
In this group layers 1 (full tangent) and layer 30=120/4 (means baryon generation 0) and layer 60 (multiplier of 10 and 12) are stronger than the others. layers 2,4,6 are a little weaker than their neighbours because strength function is an oscillatory function.
Relative Weak layers (geometrical mean between strong layers):
7, 9, 11, 13, 17, 22, 27, 35, 49, 85, 170, 294, …
Layers 4^k120 are needed to keep maximum similarity in quantum level between radius, surface and volume ratios, this means generation factor of 64^g
If layers 480 collapses then collapsing is continued until layer 16*120 to produce baryons of generation 2 so baryons in any generation have factor of $4^{3g} = 64^g$

Energy balancing of most important ramionic reaction in the universe:
In Ramionic reactions **most similar, great particles** are produced as main products, it usually means prime number:
Baryon balancing till layer 119:

$$\mathbf{(12)}\begin{cases} T(119) = 5688439 = 5\{31 * (36390 + 309) + 18\} + 4 \\ T(119) = 5688439 = 31(181950 + 5 \times 309) + 94 \end{cases}$$

Neutrino balancing:
$5 \times 309 = 1545;\ N7 = 1415;\ N4 = 309;\ N3 = 147;\ N2 = 55;\ N1 = 13;\ N0 = N(1)=1$

Neutrino notation:
N(n): A neutrino with n ramion energy
Nn: N(T(n)) for example N4=N(309) because T(4) is 309: Ramions number to layer 4
The Second type neutrinos have more chance to be generated or absorbed.
Neutrinos may start, interrupt, stop ramionic reactions and may be absorbed to or emitted (radiated) of it.
Neutrinos have short life if they get electrical charge, Baryons vice vera;
Black holes in the sky are huge neutrinos, most of them distributed their energy into the space because in some stochastic conditions small layers like 120, 480 could not stop the ramionic reaction (started by some quantum fluctuations) then very large layers did it.

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Electrical charge balancing:
Up quark charge: +2/3 e
Down quark charge: -1/3 e
Proton= 2 (Up quark) +1 (Down Quark) → charge: +1
Neutron= 1 (Up quark) +2 (Down Quark) → charge:0
Any packet (31 B1 without electrical charge) can be transformed to (15 U +9 D +7 e) after **getting** electrical charge (**means emitting** equivalent electrical Potential energy) then transformed to (7 protons +7 electrons +1 neutron) after getting extra energy of collapsing layers 120 to 479. This extra energy saved as rotation (magnetic not electric) majority in Proton and Neutrons (with larger radius than electron). Electrical charge of this reaction is balanced.

31,15,7 in this packaging are $2^n - 1$ and 9 is $2^n + 1$ means neutron to proton ratio of 7

Strong layers can stop (or at least reduce ramionic reaction speed to create an opportunity for particles to settle charges and merging together). So we expect number of baryons at layer 119 to be **prime number** 31 but Maybe electrical charging or process speed let factor 5 to appear in the final number of ramion 5*31.

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5.Ramion energy (E_r)

Ignoring rotational (magnetic energy) of electrons (in comparing to proton and neutron rotational energy with grater radius) And some little neutrino absorbed or emitted, Main Ramionic Reaction to produce B1 (Electron, Up and down quarks) is:

(13) $(T(479) - 31 \times 5 \times 309)E_r = K_P(1\ E_N + 7\ E_{Pr} + 7\ E_e)$

$E_N = 939.56542052$ MeV

$E_{Pr} = 938.27208816$ MeV

$E_e = 0.51099895000$ MeV

$T(479) = 367489759$

(14) $E_r = K_P \frac{7511.04703029\ \text{MeV}}{367489759-3\ \times 5\times 309}$; we define another factor $[K_E]$:

$E_r = [K_E]\ 102.2072845555$ eV $= [K_E]\ 1.6375412314 \times 10^{-17}$J

K_E $E_e = 0.51099895$MeV	Scenario 1 $K_E = 1$ means: $K_p = 5;\ K_n = 1$	Scenario 2 $K_E = \frac{1}{5}$ means: $K_p = 1;\ K_n = 5$	Scenario 3 $K_E = \frac{6}{5}$ means: $K_p = 6;\ K_n = 1$
$n=N_{b1}$	36390	181950	36390
E_r	102.2072845555 eV	20.4414569111 eV	122.649414666 eV
$E_{b1} = N_{b1}E_r$	3.719323084975 MeV 7.27853371318 E_e $\approx$ (7) E_e	Same as K_E=1	4.463187702 MeV 8.73424045582 E_e
$E_{Pe} = E_{B1} - E_e$	3.20832413498 MeV 6.27853371318 E_e	Same as K_E=1	3.95218875197 MeV 7.73424045582 E_e
$E_D = E_{B1} - \frac{E_{Pe}}{9}$	3.36284262553 MeV	Same as K_E=1	4.02405561842 MeV
$E_U = E_{B1} - \frac{4E_{Pe}}{9}$	2.29340124721MeV	Same as K_E=1	2.70665936776 MeV

(15) $[K_E]$ and all energy data in above table must be multiplied by k_{Neu} *or* k_{400}:

$k_{Neu} = 1 - \frac{31\times5\times309}{367489759} = 0.99986966984$;If N4 neutrino are absorbed and not radiated

$k_{400} = \frac{36400}{36390} = 1 + \frac{10}{36390} = 1.000274800769$;if 36400 used instead of 36390

When a packet get electrical charge it means delivering this energy to the reaction :

(16) $\frac{E_P \text{ of Packet}}{E_{Pe}} = (15 \times \frac{4}{9}) + (9 \times \frac{1}{9}) + (7 \times 1) = 14\frac{6}{9}$

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Scenario 1 have more probability because we see 3638,36390 in K_Q and G formulas.
Scenario 2 is possible because it means 31 baryons at layer 119 (and 31 is a prime number) and Scenarios 1 and 3 correspond t0 5*31 particles (that is not a prime number) **but** may be collapsing layer 120 leaves no opportunity to 5 baryon merging
Scenario 3 is possible because it results in more similar values to gluon modelling results $E_D = 4.8\ \text{MeV}$, $E_U = 2.3\ \text{MeV}$ but ramionics calculations are based on universe particles to have higher accuracy without any modeling based particle like gluon.

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6.Reality of Planck Constant for a particle with n ramions energy

When a matter particles (a neutrino or a baryon with $E_B = nE_r$ energy) is made of n ramion (ramion: Energy particle: Energy quanta) they collapse or explode and their energy is distributed into other ramions and a particle hole (exactly a black hole) is remained covered by 12 ramion named as wing.

We must analyse all space (toward all depths of universe) To analysis this particle (for example its gravity or electricity) which needs many integral calculations while we can ususally suppose a theoretical (or even imaginary) matter at that black hole area.

In most application we can suppose a point mass $m = E_n/c^2$ without any rotation in the center of hole. For more accuracy we can see theoretical matter is made of ramions (that have equal linear and rotation energy) so it has this property by default (without getting extra energy for example as photon) like all ramions:

(17) $E_B = E_{LB} + E_{RB}\ ;\ E_{LB} = E_{RB}\ ;\ E_{LB} = \frac{1}{2}mc^2;\ E_{RB} = \frac{1}{2}I_B\omega_B^2$

(18) $\rightarrow E_B = mc^2 = I_B\omega_B^2$

(19) $I_B = \int \rho_m r^2 dV = K_I m R_B^2$; I_B:Rotational Inertia ; R_B :Rotation Radius

K_I examples: loop:1, disk:1/2 , spherical surface: 2/3, spherical volume:2/5

(20) $R_B = K_{Rad} \times r$; r: ramions radius

K_{Rad} Examples: ramion size=hole size:1

wings electrical charge surface= max gravity=event horizon: $\sqrt{5}$

(21) $\boxed{E_B = \hbar_B\omega_B\ ;\ E_r = \hbar_r\omega_r}$; Planck constant definition for baryon and ramion

(22) $R_B E_B = R_B(\hbar_B\omega_B) = \hbar_B(R_B\omega_B) = \hbar_B c_B;\ c_B = R_B\omega_B$

(23) $\boxed{\hbar_B = \frac{R_B E_B}{c_B} = \frac{E_B}{\omega_B}}$;more fundamental definition

(24) $E_B = I_B\omega_B^2 = (K_I m R_B^2)\omega_B^2 = mc^2 \rightarrow K_I R_B^2\omega_B^2 = c^2\ ,\ c_B = \frac{c}{\sqrt{K_I}}$

(25) $\rightarrow K_I(K_{Rad}r)^2\omega_B^2 = c^2 \rightarrow \omega_B = \frac{\omega_r}{K_{Rad}\sqrt{K_I}}$

Neutrino(1) energy is equal to 1 Ramion:

(26) $\hbar_{N(1)}\frac{\omega_r}{K_{Rad}\sqrt{K_I}} = \hbar_r\omega_r \rightarrow \hbar_{N(1)} = K_h\hbar_r;\ K_h = K_{Rad}\sqrt{K_I}$

(27) $\boxed{\hbar_B = K_h n^4 \hbar_r}$

The origin of n^4 will be explained soon. In ramionics we know that $\hbar, c, K, G, \rho$ need a factor of n's power when n is number of ramions in desired particle.

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We can select sahape, K_I, K_{Rad} of imaginary particle proper to simplify our calculations. for example:

In Ramionic level analyses it's better to select $K_{Rad} = 1, K_I = \frac{2}{5}, K_h = \sqrt{\frac{2}{5}}$ means a particle as an spherical volume in size of particle hole itself without indentation with wings.

In Gravity and electromagnetic calculation: $K_{Rad} = \sqrt{5}, K_I = \frac{2}{3}, K_h = \sqrt{\frac{10}{3}}$

In scaling constant and units: $K_{Rad} = \sqrt{\frac{1}{K_I}}, K_h = 1$

Anyway K_h factor effect range is (0.1 …10) like geometrical parameters.

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7. scaling units $(\mathrm{r}, \mathrm{c}, \mathrm{E_r})$ calculating K and G by theory!

(28) Second unit: has been defined based on 9,192,631,770 oscillation of microwave radiation of cesium-133 atom transition between its two hyperfine energy levels From 1967.
Also c and h have been fixed on this standard values (without any more digits) as basic scaling units (instead of standard meter and Kg samples) From 2019:

(29) $\mathrm{c}_r = 2.99792458 \times 10^{8}\ \mathrm{m/s}$; Light Speed in vacuum space means for ramions

(30) $\mathrm{h}_{B1} = 6.62607015 \times 10^{-3}\ \ \mathrm{J \cdot s}$; as we and our devices sense means B1

$\hbar_{B1} = \frac{\mathrm{h}_{B1}}{2\pi} = 1.05457182 \times 10^{-34}\ \mathrm{J \cdot s}$;redused plank constant

We use above data and also we Calibrated $\mathrm{E_r}$ based on energy (or equivalent mass) of a{7 Protons+1 Neutrons+7 Electrons} Packet:

(31) $\mathrm{E_r} = [\mathrm{K_E}]\ 102.2072845555\ \mathrm{eV} = [\mathrm{K_E}]\ 1.6375412314 \times 10^{-17}\mathrm{J}$

Now we can calculate any physic constant by $(\mathrm{r}, \mathrm{c}, \mathrm{E_r})$

(32) $\hbar_B = K_h n^4 \hbar_r \rightarrow \hbar_\mathrm{r} = \frac{\hbar_B}{n^4 K_h} = \left[\mathrm{K_n}^{-4}\right]\frac{1}{K_h} 6.01378557098 \times 10^{-53}\ \mathrm{Js}$

$36400 \rightarrow \hbar_\mathrm{r} = \left[\mathrm{K_n}^{-4}\right]\frac{1}{K_h} 6.00717973821 \times 10^{-53}\ \mathrm{Js}$;Ramion's ħ

(33) $r = \frac{\hbar_\mathrm{r} \mathrm{c}_r}{\mathrm{E_r}} \rightarrow \mathrm{r} = \left[\mathrm{K_E}^{-1}\mathrm{K_n}^{-4}\right]\frac{1}{K_h} 1.10097231364 \times 10^{-27}\mathrm{m}$;Ramion's r

$36400 \rightarrow \mathrm{r} = \left[\mathrm{K_E}^{-1}\mathrm{K_n}^{-4}\right]\frac{1}{K_h} 1.100669848719 \times 10^{-27}\mathrm{m}$

(34) $r_n = nr \rightarrow \mathrm{r}_e = \left[\mathrm{K_E}^{-1}\mathrm{K_n}^{-4}\right]\frac{1}{K_h} 4.0064382493 \times 10^{-23}\mathrm{m}$;Electron's r

$36400 \rightarrow same$

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8.Fine-Structure Constant

(35) $R^2F = k_{B1}\, e^2 = \alpha\, \hbar_{B1}\, c_r$; definition

Electrical Charge is equivalent to Torque and rotational Energy so similar electrical charges repel each other so collecting them on any surface needs energy (Like any capacitor) that can be calculated by two simple integrals (**Electromagnetic self energy**)

(36) $E_r = 2\, E_{Rr} = 4\, E_P = T$ =Torque

(37) $E_{\Delta Q} = \int_{\infty}^{r} -F\, dr = \int_{\infty}^{r} \frac{-\, K_r\, Q\, \Delta Q}{R^2} dR = \frac{K_r\, Q\, \Delta Q}{r}$ minus sign: save Energy

(38) $E_P = \int_0^{q_r} \frac{K_r\, Q\, dQ}{r} = \frac{K_r\, {q_r}^2}{2r}$ for any sphere or semi sphere with q_r charge

for particles consisted of n Ramion:

(39) $E_P = \sum_{t=2}^{n} (t-1)\ \frac{K\,(Q/n)^2}{2\, R_Q}$ R_Q: $radius\ for\ charges\ surface$

(40) $E_p = \frac{K}{2\, R_Q} \left(\frac{Q}{n}\right)^2 \frac{n\,(n-1)}{n^2} = \frac{K\, Q^2}{2\, R_q}\left(1 - \frac{1}{n}\right)$

(41) $K_Q = \left(1 - \frac{1}{n}\right)$; **Quantum Factor**

(42) $K_Q = \left(1 - \frac{1}{36390}\right) = 0.99997251992$; B1's Quantum Factor

(43) $E_r = 2 \times 2 \times \frac{K_r\, {q_r}^2}{2r}$

(44) $\rightarrow \alpha_r = \frac{K_r\, {q_r}^2}{E_r r = \hbar_r\, c_r} = \frac{1}{2}$

The coefficient Quantum Factor refines formulas needed to compensate error of continuous calculation on really discrete parameters. Here it converts Q^2 (considered as continuous parameter) to Q^2 as a discrete charge produced by ramions.

$K_Q\ and\ K_W$ are dependent to g but independent of packet scenario

(45) $\frac{1}{\alpha} = 2^6\, \pi\, \gamma^2 \left(1 - \frac{1}{\frac{12}{2} + 12\ RoundUp\left(12\, \pi^2\, 2^6 \times \frac{4}{10}\right)}\right) \rightarrow \frac{1}{\alpha} \propto n \rightarrow\ \alpha \propto \frac{1}{n}$

(46) $R^2F = \alpha_{B1}\, \hbar_{B1} c \rightarrow\ K_{B1} e^2 \propto n^3$

(47) $(K_{B1} Q_{B1}^2) = (K_r Q_r^2) \left\{ n^3\, \frac{K_h}{K_w K_Q}\, \pi\beta \left(\frac{96}{10}\right)^2 \right\}$

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Electrical charge is essentially a conventional parameter, yet the simplest convention seems to be assume that the Coulomb constant and electrical charge both are proportional to n.

Anyway in mutual state forexample force between b1 and b2 must be calculated by geometrical mean of $(K_{B1}Q_{B1}^2)$ and $(K_{B2}Q_{B2}^2)$

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9. Calculating G and other physic constant in Ramionics

Calculating G (for baryon B1)

(48) $hE_r = \int_0^r G_r\, m\, dm \frac{1}{R}\ ;\ m = \left(\frac{4}{3}\right)\pi\, R^3\rho;\ dm = 4\,\pi R^2\rho\, dR$

$\rightarrow G_r = \frac{5\, r\, c^4}{3\, E_r} = 9.88141241595 \times 10^{27}\ m^3 kg^{-1}s^{-2}$; Gravitational Self Energy

From above equation we understand that c for particle n is $\frac{c_r}{n^8}$

(49) $G = G_r\ \frac{n^8}{48} = \frac{\hbar\, c^5}{96\, n^9\ E_{B1}^2} = \frac{\hbar\, c^5}{96\, n^{11}\ E_r^2}$; Ignoring K_W and K_Q ;

The exclusive way to Refine geometrical formula for G is increasing n from 36390 to 36400 it is the best sign for single baryon rotational (magnetic) energy equal to 10 ramion energy

(50) $G = \frac{\hbar\, c^5}{96\, n^{11}\ E_r^2} = 6.6743462768\ \times 10^{-1}\ \ m^3 kg^{-1}s^{-2}$

Above value is accurate value for alpha (accuracy more than experiments)

(51)

$G = 6.67430(\pm 15) \times 10^{-1}$ experimental value, means 6.67415 to 6.67445

Sensitivity check:

$G = 6.6763754123\ \times 10^{-11}$; Using n=36390+9

$G = 6.6743462768\ \times 10^{-11}$; Using n=36390+10; correct values

$G = 6.6723296365\ \times 10^{-11}$; Using n=36390+11

So ramionics can calculate G and Dark gravity and all cosmological parameters by only r, c, E_r

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10. Ramionic Natural Units	
Quantity	Value
Length Unit	$21.20252619595 \times 10^{-23} m$
Time Unit	
Energy Unit	$1.6375412314 \times 10^{-17} J$
Mass Unit	$1.82201034291 \times 10^{-34} kg$
Speed Unit	normalized
Charge Unit	$1.60217663 \times 10^{-19}$ C

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11.Table 1 — Calculating G and other physic constant in Ramionics

No.	Constant	Formula (Ramion)	Value (Ramion)	Formula (Baryon g = 1)	Value (Baryon g = 1)	Experimental
1	Coulomb Constant (k)	$E_p = \int_0^{e/12} \frac{K_r Q\, dQ}{r}$ $E_r = 2E_{Rr} = 4\,E_P$ $E_r = 4\,(\frac{K_r}{2r}(\frac{e}{12})^2)$ $K_r = \frac{144\ E_r\, r}{2\ e^2}$	$[{K_E}^{-3}] \times 1.2433636264 \times 10^0\ Nm^2/C^2$	$K = K_r n^2 \frac{K_h \beta \frac{\pi}{2}}{K_w K_Q}$	8.98755178414 $\times 10^9$ N·m²/C²	8.98755179 $\times 10^9$ N·m²/C²
2	Reduced Planck (ħ)	$E_r = (\hbar_r \omega)$ $E_r r = (\hbar_r \omega) r = \hbar_r c$ $\hbar_r = \frac{E_r r}{C}$ $r = \hbar_r \frac{c}{E_r}$	$\hbar_r$ $[{K_E}^3] \times 6.56849822322 \times 10^{-4}\ J \cdot S$	$\hbar = \hbar_r (K_h n^3)$	1.05457182 $\times 10^{-34}$ J·s	1.05457182 $\times 10^{-34}$ J·s
3	1/Fine Structure ($\frac{1}{\alpha}$)	$q_r = q_e/12$ $\alpha_r\, \hbar_r\, c = R^2 F(qe, qe) = k_r\, q_e^2 = 144 k_r\, q_r^2$ $E_r = 2E_{Rr} = 4\,E_P = 4\,E_P = 4\frac{k_r\, q_r^2}{2r}$ $\hbar_r\, c = E_r r = 2k_r\, q_r^2$	$\frac{1}{\alpha_r} = \frac{1}{72}$	$\frac{1}{\alpha} = 64^g\ \pi\ \gamma^2 \times (1 - \frac{1}{n})$	137 .035999920783	137 .03599921
4	Elementary Charge (e)	$q_e = 12\sqrt{\frac{\hbar_r\, c}{2K_r}}$	1.602176634 $\times 10^{-19}$ C			1.602176634 $\times 10^{-19}$ C

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No.	Constant	Formula (Ramion)	Value (Ramion)	Formula (Baryon g = 1)	Value (Baryon g = 1)	Experimental
5	K_{BH}			$K_{BH} = \frac{K_{Boltzmann}}{2\pi\,\hbar_{Planck}}$ Kelvin Calibration		2.08366 $\times 10^{10}$ Hertz/kelvin
6	Boltzmann (k_B)	$2\pi\hbar_r\, K_{BH}$	2.2826418 $\times 10^{-39}$ J/K	$2\pi\hbar\, K_{BH}$	1.38064900 $\times 10^{-23}$ J/K	1.38064900 $\times 10^{-23}$ J/K
7	Gravitational (G)	$E_r = \int_0^r G_r\, m\, dm\, /R$ $m = (4/3)\,\pi\, R^3\rho$ $dm = 4\,\pi R^2\rho\, dR$ $\rightarrow G_r = \frac{5\, r\, c^4}{3\, E_r}$	$[K_E{}^{-5}]$ 9.88630178367 $\times 10^{27}$ $m^3 \cdot kg^{-1} \cdot s^{-2}$	$G = \boldsymbol{G_r} \frac{\varphi^3}{64\, n^8\, \gamma^2}$	**6.7000 $\times 10^{-11}$ $m^3 \cdot kg^{-1} \cdot s^{-2}$**	6.67430(15) $\times 10^{-11}$ $m^3 \cdot kg^{-1} \cdot s^{-2}$
8	Space Energy Density ($\boldsymbol{\rho}, \boldsymbol{U_\Lambda}$)	$\boldsymbol{\rho_r} = [K_c{}^{-1}\,]\varphi \frac{\boldsymbol{E_r}}{\frac{4}{3}\,\pi r^3}$	2.0120448554 9φ $\times 10^{50}$ J/m³ $\times\, [K_c{}^5]$	$\rho = \boldsymbol{\rho_r} \frac{\varphi^3}{64\, n^{12}\, \gamma^2}$	5.900000 00 $\times 10^{-10}$ J/m³	5.90000000 $\times 10^{-10}$ J/m³ Planck satellite
10	Dark Gravity Range (R_dg)	$\boldsymbol{c^4 = 8\pi G_r \rho D^2}$ $\boldsymbol{D = \frac{r}{[K_c{}^2]}\sqrt{\frac{3\sqrt{2}}{10\pi}}}$	$\boldsymbol{0.3674880235} \times \frac{r}{[5^2]}$			≈9.50×10⁹ ly
11	Dark Energy Range (R_de)		6.41782205 $\times 10^{20}$ m (6.78352044 $\times 10^4$ ly)			≈6.80×10⁴ ly

The Boltzmann constant connects microscopic and macroscopic domains:It establishes the bridge between thermodynamic temperature and quantum kinetic energy.

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12.Conclusion

- Space is an FCC lattice of quantized energy spheres called Ramions.
- All constants — — arise naturally from geometry.
- The dark-energy and dark-gravity ranges emerge from the same parameters .
- Planck's cosmological parameters are precisely reproduced without empirical input.

With only three quantities (E_r, r, c) and one discrete scale (n = 182,200),
the Ramionics framework reproduces every known physical constant and cosmic scale — including — with precision better than 10^{-8},
and establishes a unified geometric foundation for matter, space, and energy.

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13.Energy equation

Ramin's Ramion theory explains how this universe is made from **only and only exactly one basic particle** (at FCC lattice) named Ramion (Rotational **A**nti-matter and **M**atter **I**on): an absolute energy $\boldsymbol{E_r}$ in form of **three-dimensional sphere** with real, measurable and calculatable parameters like energy $\boldsymbol{E_r}$, pressure **P** ,energy density $\boldsymbol{\rho_r} = \frac{E_r}{V}$,volume $\mathbf{V}=\frac{4\pi}{3}\boldsymbol{r^3}$ **,** radius **r** ,angular speed **ω**, rotational speed on its surface(**v=r. ω =c=light speed**) , torque **T**, Moment inertia **I**, mass equivalent to its energy $\boldsymbol{m}=\frac{E_r}{c^2}$ and even spin and electrical charge $\pm\boldsymbol{q_r}$ and Coulomb constant $\boldsymbol{k_r}$ and two poles: north and south! In ramionics we need no extra dimension in space or time and no imaginal or modelled parameters or Force Carrier particles.

Ramions have exactly equal linear and rotational parts of energy named $E_{Lr} + E_{Rr}$
Linear Energy → pressure → relativity → gravity & strong Nuclear force
rotational Energy→Torque→Electricity→Electromagnetic&weak nuclear force
Basic equation of Ramionics (including 26 equations)

(52) $E_r = \left\{(E_{Lr} + E_{Rr}) = 2(E_{Lr} = E_{Rr}) = 2\left(\frac{mc^2}{2} = \frac{I\,\omega^2}{2}\right) = m\,c^2 = I\,\omega^2\right\} = 2\left\{E_{Lr} = \frac{1}{2}m\,c^2 = PV = \frac{F_{Lr}}{4\pi\,r^2}\frac{4\pi\,r^3}{3} = \frac{1}{3}r.F_{Lr}\right\} = 2\left\{E_{Rr} = \frac{1}{2}I\,\omega^2 = \frac{1}{2}(mr^2)\left(\frac{c^2}{r^2}\right) = \frac{1}{2}m\,c^2 = \frac{1}{2}r \times \left(\frac{mc^2}{r}\right) = \frac{1}{2}r \times F_{Rr} = \frac{1}{2}T = 2E_P\right\} = \left\{\hbar\,\omega_m = \hbar\frac{c}{r_m} = 4\,E_P = 4\left(\frac{k_r\,{q_r}^2}{2\,r_m}\right)\right\} = \left\{\rho_r V = (\frac{\rho_s}{\varphi})V = (\rho_s)(\frac{1}{\varphi})(\frac{4\pi\,r^3}{3}) = (\frac{c^4}{8\pi G\,R_D^2})(\frac{1}{\varphi})(\frac{4\pi\,r^3}{3})\right\} = \left\{\frac{N_{(n)}=Generation\ n\ Neutrino\ Energy}{1+\frac{10n^3+15n^2+11n3}{3}} = \frac{B_{(g)}=Generation\ g\ Baryon\ Energy}{2(12\pi)^2\,64^g}\right\}$

Ramion has no problem to have speed of light because it's in energy mode (not matter) and also ramion itself generate space and time for local observers.
Ramion energy is noted as E_r in compare of other objects like baryons also Maybe it's noted as E_s (means Energy of ramion at far steady state space without any mass or time dilation in neighbourhood) in compare to ramions carrying Gravity or Electricity energy.
In pressure-gravity part of basic equation we see

(53) $\rho_r = 2P \quad and \quad E = 2PV$

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also in thermodynamics we have $\boldsymbol{E = \frac{f_r}{2} PV}$ **that means** $\boldsymbol{f_r = 4}$ when $\boldsymbol{f_r}$ is degree of freedom dimensions . we also can calculate it: 3 dimensions for location and 3 dimensions for ω, reduction of 2 dimensions for the equipotential surfaces results in 4.

In rotational-electrical part of basic equation highlighted (2) multipliers (with parenthesis) represent (2) semi-spheres of ramion with electrical Potential energy of E_{PE} .

Electrical Charge is equivalent to Torque and rotational Energy so similar electrical charges repel each other so collecting them on any surface needs energy (Like any capacitor) that can be calculated by two simple integrals:

(54) $E_r = 2\,E_{Rr} = 4\,E_P = T$

(55) $E_{\Delta Q} = \int_{\infty}^{r} -F\,dr = \int_{\infty}^{r} \frac{-K_r\,Q\,\Delta Q}{R^2} dR = \frac{K_r\,Q\,\Delta Q}{r}$;Minus sign for save Energy

(56) $E_P = \int_0^{q_r} \frac{K_r\,Q\,dQ}{r} = \frac{K_r\,{q_r}^2}{2r}$;for any sphere or semi sphere with q_r charge

North and south Semi sphere of ramions have reversed torque and consequently reversed electrical charges. In energy calculation they are appeared as $(\pm q_r)^2$so adds together as positive. In torque or electrical charge they are $\pm q_r\ and$ compensate each other to set total electrical charge of ramion at zero.

If we consider total electrical charge of ramion, it's zero then we have to calculate equivalent energy as Torque instead of electrical charge.

Basic equation shows electrical charge is only a mechanical concept (Area × Torque) and we know the magnetic field and Electromagnetic wave are generated by rotating or changes in Electrical field in their turn as Maxwell's laws explain.

In Quantum part of basic equation *we see*

(57) $E = \hbar\,\omega_m = \hbar\,\frac{c}{r_m} \leftrightarrow c = \omega_m.\,r_m\ ,\ \hbar = \frac{r_m.E}{c}$

In ramionics we define and calculate Planck constant and fine structure constant easily:

When energy particles (means Ramions) and matter particles are ready to convert to each other or transport energy they must reach to similar radius ($\boldsymbol{r_m}$) and angular speed ($\boldsymbol{\omega_m = \frac{c}{r_m}}$) to have similar [rotational energy on total energy] ratio ($\frac{1}{2}$).

Thais happens for example in this cycle for this particles:

1-An energy particle: exited and ready to convert to matter

2-Fresh matter particle produced by energy

3-When ramions indents to supply E_P (electrical potential energy) to produce electrical force

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4-When matter particles give or get electromagnetic wave energy (photons)
5-A matter particle: exited and ready to convert to energy
6-Fresh Energy particle produced by matter
Criteria to energy-matter matching:

(58) $E = T = I\,\omega^2 = \hbar\,\omega_m = 2\frac{k_r\,{q_r}^2}{r_m}\ and\ c = \omega_m.\ r_m$

(59) $\rightarrow \frac{1}{\alpha_r} = \frac{\hbar\ c}{k_r\,{q_r}^2} = 2\ ;\alpha_r\ Fine\ structure\ constant\ inside\ ramions$

(60) $I\ = k_I\ m\ {r_m}^2 = k_I\left(\frac{E}{c^2}\right){r_m}^2 = \frac{k_I E}{{\omega_m}^2}\ and\ E = I\,\omega^2$

$k_I examples:\ \frac{2}{5}\ for\ sphere, 1\ for\ loop, 1\ for\ Ramion\ itself$

(61) $\rightarrow\ \omega_m = \sqrt{k_I}\ \omega\quad ;needed\ \omega_m$ for matter particles to transport energy with ramions; $\omega = \omega_{Ramion} = \frac{c}{r}$

Also using 12 and 36384 in FCC lattice-texture-framework we can calculate mass and electrical charge of elementary particles (passing as-yet unexplored frontiers of human knowledge)
In cosmological part of basic equation we see:

(62) $\rho_r = \frac{\rho_s}{\varphi}\ ,\ \rho_s = \varphi\,\rho_r\ , \varphi = \frac{\pi}{3\sqrt{2}} = 74.048\%$

means energy density of space (so called dark energy) is ramions energy in their volume by factor of φ: the occupancy of ramions in their FCC lattice. We will show:

(63) $C^4 = 8\pi G\rho_s\,R_D^2\quad ;where\ G\ is\ gravity\ constant$

This equation relates Dark matter, Dark energy, Ramion Energy
And reality of Dark matter (forgotten gravity)

(64) $g = \frac{GM}{R}\left(\frac{1}{R} + \frac{1}{R_D}\right)e^{-\frac{R}{R_D}}$

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14.Geometry of Space Structure in Ramin Theory

Because the ramions repel one another in all directions, they ultimately reach a state of maximal compression. But in large scale they cause space and time to expand (dark energy's role).

So $P = \frac{\rho_r}{2}$ is the maximum capability of pressure, of cource there is many fluctuations (and also a little indentation for electromagnetic carrying) but high pressure in long time or hard collisions can cause the ramions to be collapsed and distributed to space (converting energy to mass)

Although usually both models (the FCC and HPC hexagonal) can be considered for ramion geometry, the FCC model, yields a softer space.

In the FCC model, each ramion has twelve nearest neighbours in the next layer, all tangent to it means layer 1 is very strong.

Table 1. Crystal Lattices — (FCC, BCC, HCP, Diamond)

Structure	Atoms/ Cell	CN	Packing (APF)	Slip / Planes	Elements	Alloys & Applications	Mechanical Behavior
FCC (Face-Centered Cubic)	4	12	0.74 (74%); Vf = 0.74	12 slip systems on {111}<110> (close-packed) — easy slip	Al, Cu, Ni, Ag, Au, Pt, Pb, Ir, Pd	Austenitic stainless (γ-Fe), Ni superalloys (Inconel), Al-alloys (2xxx/6xxx/7xxx), Cu-alloys	Very ductile & tough; low DBTT; excellent formability
BCC (Body-Centered Cubic)	2	8	0.68 (68%); Vf = 0.68	{110}, {112}, {123}<111>; no close-packed planes → higher Peierls stress	α-Fe, Cr, W, Mo, V, Nb, Ta	Ferritic/martensitic steels, low-alloy steels; high-T strength (W, Mo)	Strong, less ductile; DBTT present; often harder/brittle at low T
HCP (Hexagonal Close-Packed)	6	12	0.74 (74%); Vf = 0.74	Basal {0001}<11-20> + prismatic/pyramidal; anisotropic;	Mg, Ti(α), Zn, Zr, Co, Cd	Ti-6Al-4V (α+β), Mg-alloys (AZ31, ZK60), Zr-alloys (nuclear cladding)	Good specific strength; lower ductility at RT; texture-dependent

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				limited slip at RT			
Diamond Cubic (Covalent)	8	4	≈0.34 (≈34%) ; Vf ≈ 0.34	Strong tetrahedral covalent bonds; cleavage on {111}	C (diamond), Si, Ge (SiC related polytypes)	Semiconductors (Si, Ge); diamond cutting/abrasives; heat spreaders	Extremely hard, brittle; Si/Ge are semiconductors

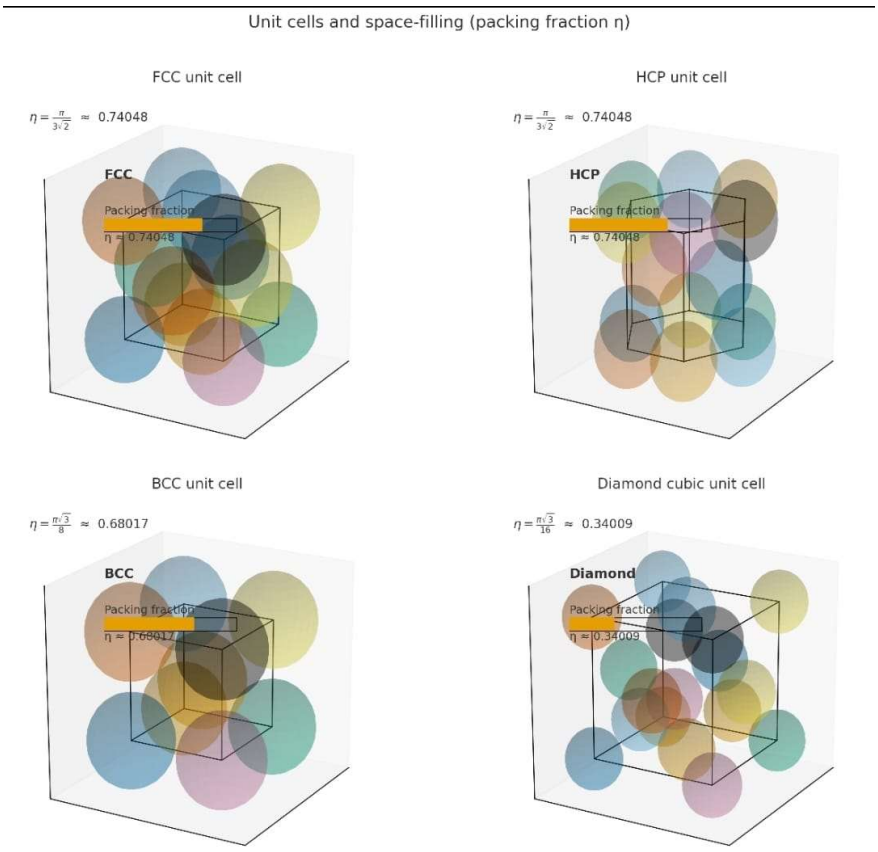

Figure 1

Geometry shows number of ramions in layer n as follows:

(65) $L(n) = 10n^2 + 2$

for example L(1)=12, L(2)=42 but L(0)=1 means centre

IL(t)=Rounded up of Inverse Function of L

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The cumulative number up to and including layer N is:

(66) $T(n) = (1\ for\ centre) + \sum_{k=1}^{n}(10k^2 + 2)$

(67) T(n) = $(1\ for\ centre) + \frac{10^{\ 3}+15n^2+11n}{3}$

IT(t)=Rounded up of Inverse Function of T

(68) $\varphi = \frac{\pi}{3\sqrt{2}} = 0.74048048969$;volume occupancy

Ramion theory introduces two new geometry constant: φ' and β:

For layers sufficiently distant from the assumed centre, we have:

(69) $\varphi\ \frac{4\pi}{3}\ R^3 = N\ (n)\frac{4}{3}\ \pi\ r^3$

(70) $R = \varphi'\ n\ (2\ r)$;φ': $diameter\ factor$

(71) $\varphi\ \frac{4\pi}{3}\ \left(\varphi'\ n\ (2\ r)\right)^3 = (10\ n^2)\frac{4}{3}\ \pi\ r^3$

(72) $\varphi' = \sqrt[3]{\frac{10}{24\ \varphi}} = \sqrt[3]{\frac{10\sqrt{2}}{8\pi}} = 0.8255785095$

Whether we consider ramions covered area as circle $\boldsymbol{\pi r^2}$ of their cross section area to layer sphere **or** as a hemisphere surface $\frac{\boldsymbol{4\pi r^2}}{\boldsymbol{2}}$ but with applying the cosine factor of vector multiplication,

the ratio of the ramions covered area to the layer area is **β**

(73) $(10n^2 + 2)\pi r^2 = \beta\ 4\ \pi\ R^2 = \beta\ (4\pi)\ (\varphi'\ n\ 2\ R)^2$

(74) $\rightarrow \beta = \frac{10}{16\ \ '^2} = \frac{10}{16\ (\frac{10\sqrt{2}}{8\pi})^{\frac{2}{3}}} = 0.91698716849$

We will see these parameters in fine structure constant that approves the geometry of energy distribution in the space means ramion lattice texture.

Geometric Classification of Volumetric, Surface, and Radial Parameters in FCC Layered Structure

1-Volume Models

R_{MPV} : Maximized Planar Volume

R_{MCV} : Maximized Curved Volume, Caps

2-Surface Models

R_{MTS} : Maximized Total Spherical Surface (of Ramions Surface)

R_{MNS} : Maximized Normal ($cosine\ weighted$) Spherical Surface

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R_{MPS} : Maximized Planar Section Surface, Circles
R_{MCS} : Maximized Curved Section Surface

3-Radial Models

3.1-Equalisation Base radial:

R_{EPV} :Equal Planar Volume (Internal and external due to R)
R_{ECV} : Equal Curved Volume, Caps
R_{ETS} : Equal Total Spherical Surface (of Ramions Surface)
R_{ENS} : Equal Normal $cosine\ weighted$ Spherical Surface (of Ramions).

Layers have too much radius definitions and even we can define new radius by equalisation or maximization any couple of them. For example:

R_E**:** Equilibrium radius: Equal derivative of the occupied volume fraction and the cosine weighted surface contribution:

(75) $$\frac{d}{dR}\frac{Volume\ occupancy}{R^3} = \frac{d}{dR}\frac{cosine\ weighted\ surface}{R^2}$$

For layer 1:

(76) $$3u^4 - 16\,u^3 + 18u^2 + 11 = 0\,;u = \frac{R_e}{r}$$

(77) $$\rightarrow\ R_{E1} = 2.1219157809\,r = R_1 + 2.1219157809\,r$$

Physical Meaning: At Re, the volumetric expansion and the surface flux of the layer are dynamically balanced. This represents the geometric point where neither surface-dominated nor volume-dominated growth prevails.

3.2-Range based radial:

R_{AP} : Include or covers All Points of ramions volume, maximum distance to centre
R_{NP} : include None of Points this layer ramions volume, minimum distance to lattice centre, equals to previous layer R_{AP}
R_{AC} : Include or covers All Centres of ramions volume, maximum distance to centre
R_{NC} : include None of Centres this layer ramions volume, minimum distance centre

$$R_{MR}: mid\ range\ of\ all\ point\ or\ cenres: \frac{R_{AP} + R_{NP}}{2} = \frac{R_{AC} + R_{NC}}{2}$$

R_{CMed}: Centres median, median of distance between ramion Centres and lattice centre

3.3-average based radial:

R_{CMn}: power mean of centres position = $\sqrt[n]{\sum R_c^n}$
R_{CM}: Mean of centres position (=**R=Default Radius of layer)**

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15.Strong and super strong layers

The methods to determine strongest layer against collapsing:

1-mechanical test: too expensive: for example we need 3,333,333,333 testing bolls with force and torque sensors and a pressing system to determine weak and strong layers (only for layer 1 to 1000 analysis)

2-Computerised simulation: expensive yet: needs heavy program and huge super computers to analyse all forces and torques on so much spherical surface.

3-Radius analysis: layers that their all types of radius have relation similar to layer 1 or ∞ are strong because in layer 1 or ∞ all ramions are tangent to make strong layer. This method is better than two above mentioned methods but very hard yet

4-the best method introduced in Ramionics:

Strong layers are similar to layer 1 so they are 12 multiplier On the other hand Strong layers are similar to very large layers that their ramions number is $10n^2+2 \approx 10n^2$ so they 10 multiplier.

So we can conclude that strong layers are 120 multiplier (but 30 included)

Super strong layers numbers are 30×4^n, (also for other bases, but not needed in usual ramionic reactions)

30, 120, 480, 16×120, 64×120, 256*120, …

Strong layers: other 120 multipliers or factors:

1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 30, 40, 60, 240, 360, 600,…

larger layer is stronger (inside group)

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16.Quantumized Gravity, Relativity, Strong Forece and so called Dark Matter

(78) $\rho_r = \frac{\rho_s}{\varphi}$, $\rho_s = \varphi\, \rho_r$, $\varphi = \frac{\pi}{3\sqrt{2}} = 74.048\%$

ρ_r: Ramion volume energy density

ρ_s: Space Energy density

Not only matters are not created by stopping or concentration of energy but also Matters (for particles or even huge black holes) are collapsing some ramions and distributing their energy into other ramions in the space, more close more share of energy. After that a black hole remains with radius of r1=R_H and velocity of v1. This hole equation is same in elementary particles in an atom or huge black holes in the space. 12 expanded ramions with r1 radius surround that hole. so not only light, but also mass is a wave in space. There is no particle-wave paradox except what our observation (by eye or device) and technology prefers or lets us.

When Ramions get extra energy they can't save it by increasing their pressure or velocity (light speed C) is on maximum value for this universe and there is no space to increase volume. They can tolerate a little extra pressure but only as fluctuation or short time in their dynamics and not in steady state, else they collapse consequently. Only remained way is expanding space itself. But time (for observer on ramions surface) also must be expanded (dialled) with same factor (to save c and energy values) also Space expansion factor must exactly Balance Force on any Ramion and also on its layer simultaneously:

(79) $F_{(R)} = F_s \rightarrow {r_{(R)}}^2 P'_{(R)} = {r_s}^2 P_r \rightarrow {r_{(R)}}^2 \rho'_{(R)} = {r_s}^2 \rho_r$ F_s, r_s, t_s: Ramions Bond force, radius (or perimeter), times base at far steady state space

F, r, t: relative values sensed & observed at any ramions surface

$P'_{(R)}$ and $\rho'_{(R)}$: relative (not absolute) energy density and pressure as the observer on surface of ramion senses. They are less than P_r and ρ_r and so simulate a vacuum and gravity to the hole interpreted as matter.

(80) $\rho'_{(R)} = \rho_s\,(1 - f_{(R)})$

(81) $P'_{(R)} = P_s\,(1 - f_{(R)})$

Function $f_{(R)}$ is defined to simplify solving equations.

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(82) $t_{(R)} = \frac{t_s}{\sqrt{1- f_{(R)}}} = t_s\sqrt{\frac{\rho_s}{\rho'_s}}$

(83) $r_{(R)} = \frac{r_s}{\sqrt{1- f_{(R)}}} = r_s\sqrt{\frac{\rho_s}{\rho'_s}}$

Force on m2 is calculated by integralling $p' \times dS$ on its surface:

(84) F $= \int P' \times dS$

(85) $\rightarrow \quad F = (V_{m2} = \frac{m_2 C^2}{\rho_2})(\frac{-\partial P'}{\partial R})$, $minus\ for\ gravity$ 9

(86) ρ_{m2}: $when\ we\ \ consider\ a\ particle\ as\ compressed\ mass\ in\ its\ hole$

g: gravity acceleration toward centre

(87) $\rightarrow g_{m2} = (\frac{\rho_s}{\rho_2})\ \frac{c^2}{2}\left(\frac{-d}{dR}\right)$;for one particle m2 when m1>>m2

(88) $\rightarrow g_r = (\frac{\rho_s}{\rho_2})\ \frac{c^2}{2}\left(\frac{-d}{dR}\right)$; for one ramion or neutrino N1

Condition m1>>m2 means all space expansion is due to m1,it consists of too much particles, Force on above formula only calculates Force of m1 on m2, to resolve these criteria and have same (F1=force of m2 on m1) and (F2=Force of m1 on m2) we have to consider geometrical mean of $\frac{\rho_s}{\rho_{m1}}\ and\ \frac{\rho_s}{\rho_{m2}}$; on the other hand density of hole particle is proportional to particle's energy to power 3 because we are consider all energy in a small particle hole with radius near to r. so the refining factor for g and G is:

(89) $G_{pq} = G_r\ \frac{\rho_s}{\sqrt{\rho_p\ \rho_q}}\ ;\ g_{pq} = g_r \frac{\rho_s}{\sqrt{\rho_p\ \rho_q}}$

energy balance equation:

(90) $m_1C^2 = E_{m1} = \int_0^\infty (\rho_s - \rho')\ 4\pi R^2\, dR$

(91) $m_1C^2 = 4\pi\rho_s \int_0^\infty f\, R^2\, dR$

So we have 3 criteria's:

1 - $f_{(R)}$function must be bounded between 0 to 1, Continuous, Differentiable , monotonically decreasing functions, convergent to zero at infinity.

2 - $\left(\frac{-df}{dR}\right)\ functions$ Must be monotonically decreasing functions, convergent to zero at infinity.

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$3-\ integral\ (\int_0^\infty f\ R^2\ dR)$ Must be finite and positive, so that energy can be balanced.
The general solution:

(92) $f = (\frac{B}{R})^k\ e^{-(\frac{R}{A})^P}\ ; criteria: 0\ <\ p\ \leq k\ <\ 3$

factor $(\frac{B}{R})^k$ is needed to decrease function in close R when exponential factor $e^{-(\frac{R}{A})^P}$ is almost 1. exponential factor is needed to limit the calculated energy, forgetting this part leaded to dark matter idea.
In very close or accurate calculation we have to compute discrete equations of FCC lattice, all needed equations or supported in ramionics, but in most application Continuous analyses is enough:
Solution A: Integer k and p: Discrete k and p

(93) $f = \sum f_{kp} = \sum(\frac{B_{kp}}{R})^k\ e^{-(\frac{R}{A_{kp}})^P}$

Gravitational Acceleration:

(94) $g = \sum g_{kp} = \sum \frac{C^2}{2}\left(\frac{-df_{kp}}{d_R}\right) = \frac{C^2}{2}\sum(\frac{B_{kp}}{R})^k \frac{1}{R}\left\{k + p\,(\frac{R}{A_{kp}})^p\right\} e^{-(\frac{R}{A_{kp}})^P}$

Energy Balance:

(95) $E = \sum E_{kp} = \sum 4\pi\rho_s\, B_{kp}^k\, A_{kp}^{3-k} z_k(p)$

(96) $z_k(p) = \left(\frac{1}{p}\right)\Gamma\left(\frac{3-k}{p}\right)\ when\ \Gamma(n) = (n-1)!$ Gamma function

Therefore: we have 3 terms in answer :
K=1, p=1 Long Range Gravity: consist of bright Gravity (proportional to 1/R2 as great Newton and great Einstein said) and Dark Gravity at far range (so called dark matter that Ramion Theory explains and models it simply without any dark matter particle)
K=2, p=1 Middle Range Gravity (between short and long) maybe its helpful for fitting long range and short range gravities.
K=2, p=2 short Range Gravity means Strong nuclear force

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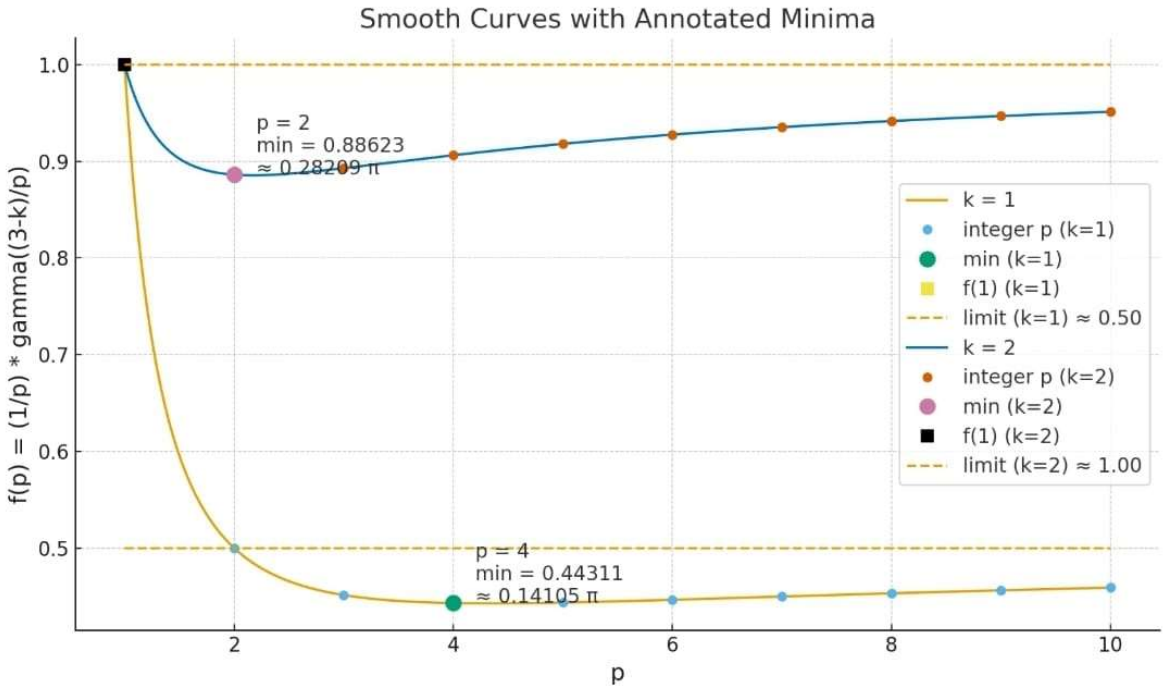

(97) $$\rho'_s = \rho_s \left(1 - \frac{R_F}{R} e^{-\frac{R}{R_D}} - \left(\frac{B_1}{R}\right)^2 e^{-\frac{R}{A_1}} - \left(\frac{B_2}{R}\right)^2 e^{-(\frac{R}{A_2})^2} \right)$$

(98) $$g_r = \frac{C^2}{2R} \left\{ \begin{array}{c} (\frac{R_F}{R})^1 \left(1 + 1\left(\frac{R}{R_D}\right)^1\right) e^{-\frac{R}{R_D}} \\ + \left(\frac{B_1}{R}\right)^2 \left(2 + 1\left(\frac{R}{A_1}\right)^1\right) e^{-\frac{R}{A_1}} \\ + \left(\frac{B_2}{R}\right)^2 \left(2 + 2\left(\frac{R}{A_2}\right)^2\right) e^{-\left(\frac{R}{A_2}\right)^2} \end{array} \right\}$$

In energy balancing we can ignore energy for k=2 parts:

(99) $$R_F = \frac{2G\,M}{C^2} \; and \; g = \frac{GM}{R}\left(\frac{1}{R} + \frac{1}{R_D}\right) e^{-\frac{R}{R_D}}$$

(100) $$E = 4\pi\rho_s \left\{ \begin{array}{c} R_F^1 \, R_D^2 \int_0^\infty x \, e^{-(x)^1} \, dx \\ + B_1{}^2 \, A_1{}^1 \int_0^\infty x^2 \, e^{-(x)^1} dx \\ + B_2{}^2 \, A_2{}^1 \int_0^\infty x^2 \, e^{-(x)^2} dx \end{array} \right\}$$

(101) $$E = 4\pi\rho_s \, R_F^1 \, R_D^2$$

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(102) $\rightarrow \; E = 4\pi\rho_s \; (R_F = \frac{2\,G\,M}{C^2})\; R_D^2$

(103) $\rightarrow C^4 = 8\pi G\rho_s R_D^2$ relating light speed c , G constant, space energy density ρ_s and radius of dark gravity observation R_D.

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17.Solution B: floating k and p: Continuous k and p

As the distance R decreases from infinity to R1, parameters k=p increase from 1 to 2:

(104) $k = p = \left(1 + \frac{R_1}{R}\right)$

$R >> R_1$ results in K=p=1

R_1 : Surface of particle hole where k=p=2

(105) $\rho'_s = \rho_s(1-f) = \rho_s \left(1 - \left(\frac{R_F}{R}\right)^{\left(1+\frac{R_1}{R}\right)} e^{-\left(\frac{R}{R_D}\right)^{\left(1+\frac{R_1}{R}\right)}} \right)$

(106) $R_D \gg R_F \gg R_1 \rightarrow$ above equation is very simple

For long range R>>R_1 we see Bright and Dark gravity:

(107) $\rho'_s = \rho_s(1 - \frac{R_F}{R} e^{-\frac{R}{R_D}})$

(108) $g = \frac{G\,M}{R}\left(\frac{1}{R} + \frac{1}{R_D}\right) e^{-\frac{R}{R_D}}$

For short range R we see strong nuclear force:

(109) $\rho'_s = \rho_s \left(1 - \left(\frac{R_F}{R}\right)^2 e^{-\left(\frac{R}{R_D}\right)^2}\right)$

(110) $g = \frac{G\,M}{R^3}\left(2 + 2\left(\frac{R_F}{R}\right)^2\right) e^{-(\frac{R}{R_D})^2}$

Energy:

(111) $E_m = \rho_s \int_0^\infty f\ 4\pi R^2\, dR$

$=4\pi\rho_s R_F\, R_D^2 (\ 1\ + \frac{R_1}{R_D}(ln(\frac{R_F}{R_D}) + 2\gamma - 1)\ + O(\frac{R_1^2}{R_D^2})\ )$

γ =0.5772156649 Euler – Mascheroni constant

O: big O function, Order of the error term, nothing to calculate

(112) $E_m = 4\pi\rho_s R_F\, R_D^2 \rightarrow C^4 = 8\pi G\rho_s\, R_D^2$

same as solution A ; because $R_1 \ll R_D$

(113) $E_x = \rho_s \int_0^x f\ 4\pi R^2\, dR =$

$= 4\pi\rho_s R_F\, R_{Dp}^2 \left(1 - e^{-\frac{x}{R_D}}\right)\left(1 + \frac{x}{R_D}\right)$

$= 4\pi\rho_s x R_F R_D$;for small x

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E_x is proportional to x near centre, it means density is proportional to $\frac{1}{R^2}$ so We can conclude If we suppose all mass concentrated in the particle hole (for simplify calculation and not really), its density inside the hole changes proportional to $\frac{1}{R^2}$, the results are same:

(114)
$$\begin{cases} \int_0^{R_H} (\rho_m \ \frac{R_H^2}{3R^2})\ 4\pi R^2 dR = \rho_m \left(\frac{4\pi}{3} R_H^3\right) \\ \int_0^{R_H} (\rho_m)\ 4\pi R^2 dR = \rho_m \left(\frac{4\pi}{3} R_H^3\right) \end{cases}$$

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19.Relativity and Time dilation

(115) $$t_{(R)} = \frac{t_s}{\sqrt{1- f_{(R)}}} = t_s\sqrt{\frac{\rho_s}{\rho'_s} = \frac{r^2}{{r_s}^2}} = t_s \frac{r}{r_s}$$

For example in long range part of gravity:

(116) $$t_{(R)} = \frac{t_s}{\sqrt{1-(\frac{R_F}{R})}} = \frac{t_s}{\sqrt{1-(\frac{2G\,M}{c^2\,R})}}$$

If a mass moves at speed **v**, we obtain the following relation:

(117) $$t_{(R)} = t_s\sqrt{1 - (\frac{v^2}{c^2} = \frac{R_F}{R})}$$

There is no distinction between these two terms $\frac{v^2}{c^2} or \frac{R_F}{R}$ just as a body must $obtain$ the speed V (escape velocity) to escape of gravity of $itself$.

However, the speed and the energy are observer-independent. When a mass "moves", the ramions effectively move in the opposite direction because mass is a hole and distributed energy in all space.

In this theory we can study time dilation more than relativity or quantum theories by above formulas.

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20.Energy of moving objects:

We can simply form R' function like to R'(x,y,z) or R'(R,θ,φ) or R(r, φ,z) to obtain distance of any point in space to last position of object due to ratio of its (v or ω) to c.
(in fact gravitational wave is travelling by light speed because this is maximum speed of data or energy through Ramions unless a narrow net connects two Ramions by empty geometry between other Ramions in warm hole or entanglement state)
Anyway we consider gravity speed as c

$$\mathbf{(118)} \qquad E = \rho_s \int \frac{R_F}{R'} \; e^{-\frac{R'}{R_D}} \; dV$$

for example in spherical:

$$\mathbf{(119)} \qquad E = \rho_s \int \frac{R_F}{R'} \; e^{-\frac{R'}{R_D}} 4\pi R^2 \, dR$$

If an object moves with speed x along a straight line, every point in space (at distance R from it) senses it $v\,\Delta t$ behind, therefore:

If an rotates on a circle of radius r with angular speed ω:
So in Ramin theory energy of rotating object on closed routes is not infinity
and based on the path we simply and accurately compute the energy attributed to the object.

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21.Electromagnetism, weak Force and Fine Structure constant

Electrical charges: When a particle forms (i.e., a cavity or black hole devoid of ramion), then around that cavity, in a persistent manner, twelve ramion are situated.
These twelve Ramions are located around the cavity and must satisfy torque equilibrium.
Therefore, they form pairs—two by two—that produce similar charge.
As a result, we have six pairs with positive and negative charge.
Among these six pairs, if all have the same sign, we have charge -e or +p.
Thus, each Ramion has the electric charge as follows: $\pm\frac{e}{12}$
If one pair is opposite to the others, then the net charge is:

(120) $Q=\pm\frac{8}{12}e=\pm\frac{2}{3}e$

And if two pairs are opposite to the other four pairs, the net charge will be as follows:

(121) $Q=\pm\frac{4}{12}\ e=\ \pm\frac{1}{3}\ e$

Ramionics describes simply why the possible charges of any particle can only be the 7 following numbers:0 or $\pm1\ or\ \pm\frac{2}{3}\ or\ \pm\frac{1}{3}$

Electrical potential energy (Ep)
Electrical Charge is equivalent to Torque and rotational Energy so similar electrical charges repel each other so collecting them on any surface needs energy (Like any capacitor) that can be calculated by two simple integrals:

(122) $E_r=2\ E_{Rr}=4\ E_P=$ T

(123) $E_{\Delta Q}=\int_{\infty}^{r}-F\ dra=\int_{\infty}^{r}\frac{-\ K_r\ Q\ \Delta Q}{R^2}dR=\ \frac{K_r\ Q\ \Delta Q}{r}$ minus sign: save Energy

(124) $E_P\ =\int_0^{q_r}\ \frac{K_r\ Q\ dQ}{r}=\frac{K_r\ {q_r}^2}{2r}$ for any sphere or semi sphere with q_r charge

for particles consisted of n Ramion:

(125) $E_P=\ \sum_{t=2}^{n}(t-1)\ \frac{K\ (Q/n)^2}{2\ R_Q}$ R_Q: $radius\ for\ charges\ surface$

(126) $E_p=\ \frac{K}{2\ R_Q}\left(\frac{Q}{n}\right)^2\frac{n\ (n-1)}{n^2}=\ \frac{K\ Q^2}{2\ R_q}\left(1-\ \frac{1}{n}\right)$

(127) $K_Q=\left(1-\ \frac{1}{n}\right)$; **Factor**

(128) $K_Q=\left(1-\frac{1}{36390)}\right)=0.99997251992$; **Factor** for B1 in all scenarios

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The coefficient **Factor** refines formulas needed to compensate error of Continuous calculation on really discrete parameters. Here it converts Q^2 (considered as Continuous parameter) to Q^2 as a discrete charge produced by ramions.

Fine Construction Constant

(129) Definition: $\alpha_{B1} = \frac{K_{B1}\, e^2}{\hbar\, c} \;\leftrightarrow\; K_{B1} = \frac{\alpha_{B1}\, \hbar\, c}{e^2}$

In Ramionics we know Electrical Field is carried by Ramions with their indentation proportional to their E_P (Electrical Potential Energy) and if pure force between electron and neutron is zero So we can say all baryons of generation 1 (down and up quarks and electrons) are similar (with same total E we name it E_{B1}) with equal radius so their $E_P = \frac{kq^2}{2\,r}$ is proportional to q^2

Alpha measured values for B1 Baryons (electron, up, down)

(130) $\frac{1}{\alpha} = 137.035999046(\pm 27)$ Cz recoil (Berkeley 2018)

(131) $\frac{1}{\alpha} = 137.035999206(\pm 11)$ Rb recoil (LKB,Paris 2020)

(132) $\frac{1}{\alpha} = 137.035999177(\pm 21)$ CODATA (2022) ; Committee on Data for Science and Technology

In Ramionics we see all B1 (baryons of generation 1: Down Quark, Up Quark, Electron) have total energy (Mass + E_P) of:

(133) $$n_g = \frac{E_{Bg}}{E_r} = \left\{\frac{3\varphi}{\gamma^3}12^2\right\}64^g = \left\{\frac{4\pi^2}{10}\,12^2\right\}64^g = \left\{\frac{4}{10}(12\pi)^2\right\}64^g$$

$$n_g = 12\; RoundUp\left(W_g\right);\; W_g = \frac{4}{10}12\pi^2 64^g$$

$\rightarrow W_0 = 47.4\,;\; n0 = 12 * 48 = 576;\; W_1 = 3031.9;\; n1 = 36384;$

it means any B1 is made by collapsing 36384 Ramions

64^g : baryon generation factor

$\frac{3\varphi}{\gamma^3}12^2$: Ideal FCC to balance volume /surface, Energy /Torque

(134) $\frac{1}{\alpha_\infty} = \pi\gamma^2\, 64^g = \pi\, \left(\frac{10\sqrt{2}}{8\pi}\right)^{\frac{2}{3}} 64 = 137.03976507112$

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(135) $\frac{1}{\alpha_{E1,E2}} = \frac{1}{\alpha_\infty}\sqrt{1-\frac{1}{6+N_1}}\sqrt{1-\frac{1}{6+N_2}}$; $\alpha\ for\ particles\ E1\ \&\ E2$

(136) $\frac{1}{\alpha_{B1}} = \frac{1}{\alpha_\infty}(\sqrt{1-\frac{1}{6+N_1}})^2 = 137.03599920783$; for any B1

When we calculate electrical force by $\frac{\alpha\,\hbar\,c}{R^2}$ there is no need to multiply $Q_f = \sqrt{1-\frac{1}{6+N_1}}$ factors but alpha is defined as $\alpha_{B1} = \frac{K_{B1}\,e^2}{\hbar\,c}$ so alpha needs to be divided by means $\frac{1}{\alpha_{B1}}$ needs to be multiplied in Q_f factors.

So Electrical Force depends on Total Energy of particle, More Energy means larger Radius, Less Ep, Less Force. We need to double check mass and electrical charge measured or calculated for Heavy Particles (B1 next generation).

Another idea is using $\sqrt{1-\frac{5}{30+181920}}$ for discrete factor instead of $\sqrt{1-\frac{1}{36390}}$ the results are same for fine structure:Factor 5 models area ratio of horizon radius to particle hole radius. Horizon radius $\sqrt{5}r$ is the radius that we want to consider all electrical charge surface when we have considered all the mass inside the hole before. Notice that gravity at $\sqrt{5}r$ is at maximum state and there is a negative gravity in the inner radius .

Electrical field distribution calculation sample:

Ramions supply E_{Pe} easily by getting align with electrical field and a little indentation, with giving Energy of overlapped volume to space and a little decreasing in their pressure. No need to expand or stretch the space. They need manipulating space time when receiving energy not at sending energy because they can't increase the pressure. This process describes how electrical field is distributed without any energy or need to photon or electrical field lines.

This Negative Equivalent Mass or energy and force (maybe in combination with the strong nuclear force) and possibility of collapsing Ramion because of too indentation is modelled by weak nuclear force.

Suppose two particles $(Q1, R1, r1 = r_{m1})\ and\ (Q2, R2, r2 = r_{m2})$

Q2 on centre and Q1 on Z axis at far distance: R>>R1 and R>>R2

(137) $V_{common} = 2V_{cap} = 2\pi d^2 r(1-\frac{d}{3r})$

r, v: $ramions\ radius$ and volume , d: indentation depth

$any\ commom\ \ volume\ consists\ of\ 2\ caps$

(138) $\frac{V_c}{V} = \frac{3}{2}\left(\frac{d}{r}\right)^2\left(1-\frac{d}{3r}\right) = \frac{3}{2}\left(\frac{d}{r}\right)^2$; $d \ll r$

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Electrical Potential Energy of Q1

(139) $E_{p1} = \frac{K_r}{2R_1} {Q_1}^2 (1 - \frac{E_r}{E_{Q1}})$

(140) $R_1 = \sqrt{5}\, r_1$; a little larger than $2r_1$

Radius of an electrically charged particles must be defined on a radius that sum of internal part of ramions is exactly equal to sum of external part of ramions. $\sqrt{5}$ is calculated by geometry. r1 is the radius of central hole = radius of any of 12 ramions surrounded it.

(141) $E_{p1} = 12\, E_{Q1L1}\, \frac{V_c}{V} = 18\, \rho_r \left(\frac{d_1}{r_1}\right)^2$;; $E_p supplied\ by\ indentation$

E_{Q1L1}: Energy of layer 1 ramions of Q1

d1: indentation of layer 1 to layer 2 to supply Electrical potential energy. layer2 will get total of this energy be indentation to layer 2 and …This process explain how electrical field is distributed in the space.

(142) $E_{p1} = \rho_r 2\pi r\, (d_n)^2\, L(n)$; $E_p\ Distribution\ on\ layer\ n$

(143) $L(n) = 10n^2 + 2$; $R =$ □'n2r ; from Fcc Geometry

(144) $E_{p1} = \rho_r 2\pi r\, (d_n)^2 \frac{10R^2}{4\ \alpha'^2\ r^2}$; $E_{p1} = \frac{K_r}{2\ R_1} {Q_1}^2 (1 - \frac{E_r}{E_{Q1}})$

(145) ${d_{(R)}}^2 = \frac{\alpha'^2}{10\ \pi} \frac{k_r}{\rho_r} {Q_1}^2 \left(1 - \frac{E_r}{E_{Q1}}\right) \frac{r}{R_1} \frac{1}{R^2}$ $\rightarrow d: Proportional\ to\ \frac{1}{R}$

pressuring part of ramions energy supports **Ep energy** while **rotating part** of ramions energy carries **electrical Force**. **So electrical field distributes to infinity by indentation without and force and without any energy**. Until it hits to another electrical charge Q2.

At **first step** we suppose Q1>>Q2 so ramions layer 1 of Q2 have indentation normal to z axis due to Q1 (anyway their torque direction is from centre of Q2)

Moment of inertia in parallel with rotation axis:

(146) $I_{\parallel} = I_Z = \frac{\pi\, m}{60} d^3 (40\, r^2 - 30\, d\, r + 6\, d^2)$

Moment of inertia Normal to rotation axis:

(147) $I_{\perp} = I_X = \frac{\pi\, m}{60} d^2 (60\, r^3 - 80\ d\, r^2 + 45\ d^2 r - 9\, d^3)$

Total Moment of inertia as great Edward John Routh explained:

(148) $I = I_{\parallel}\, Cos^2\theta + I_{\perp}\, Sin^2\theta$

(149) $F_Z = \frac{\pi}{4}\, \rho_m \omega^2 d^2 (2r_2 - d)^2 Sin^2\theta$

F_z or Force toward Q1 generated by rotation of any ramion around Q2 black hole:

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(150) $F_Z = \pi \frac{\rho_r}{c^2} \omega^2 d^2 {r_2}^2 Sin^2\theta \; ; \; \rho_m = \frac{\rho_r}{c^2} \; ; \; r_2 \ll d$

(151) $F_Z = \pi \, \rho_r \frac{d^2 {r_2}^2}{r^2} Sin^2\theta \;\; ; c = r\omega$

(152) $F_2 = (8 \; (sin \; \frac{\pi}{4})^2 + 4 \, (sin \; \frac{\pi}{2})^2) \, F_Z \;\; ; F \; of \; Q_1 on \; Q_2$

(153) $F_2 = 8 \, F_Z$

(154) $F_2 = 8\pi \, \rho_r \frac{{r_2}^2}{r^2} d^2 \;\; ; {d_{(R)}}^2 = \frac{\alpha'^2}{10 \, \pi} \frac{k_r}{\rho_r} \, {Q_1}^2 \left(1 - \frac{E_r}{E_{Q1}}\right) \frac{r}{R_1} \frac{1}{R^2}$

(155) $F_2 = \frac{8 \, \alpha'^2}{10} \frac{{r_2}^2}{r \, R_1 \, R^2} k_r {Q_1}^2 \left(1 - \frac{E_r}{E_{Q1}}\right)$

to make symmetry and remove criteria $Q_1 \gg Q_2$:

(156) $F_1 = \frac{8 \, \alpha'^2}{10} \frac{{r_1}^2}{r \, R_2 \, R^2} k_r {Q_2}^2 \left(1 - \frac{E_r}{E_{Q2}}\right)$

(157) $\mathrm{F} = \mathrm{F_{Q1,Q2}} = \sqrt{\mathrm{F_1 F_2}}$

(158) $\mathrm{F} = \frac{8 \, \alpha'^2}{10} \sqrt{\frac{{r_1}^2}{r \, R_1}} \sqrt{\frac{{r_2}^2}{r \, R_2}} \frac{k_r Q_1 Q_1}{R^2} \sqrt{1 - \frac{E_r}{E_{Q1}}} \sqrt{1 - \frac{E_r}{E_{Q2}}}$

(159) $\frac{8 \, \alpha'^2}{10} \sqrt{\frac{{r_1}^2}{r \, R_1}} \sqrt{\frac{{r_2}^2}{r \, R_2}} = 1$

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22.Matter–antimatter Asymmetry

Our Universe is similar to a Ramion—perhaps a ramion nested within its mother cosmos, with the possibility of an unbounded mother–daughter hierarchy, or even a recursion in which the whole curls back into its own core. In any case, the only plausible rationale for the breaking of matter–antimatter symmetry is that our Universe is currently performing the rotation.

If, in our surroundings (i.e., within the hemisphere of the Universe we inhabit), the rotation is such that a slight negative charge resides in the internal vacuum of space, then this small excess (together with electric-charge conservation) drives the heavier particles to become + and the lighter particles to become −.

Thus, in the other hemisphere of our universe, antimatter may perhaps dominate.

Therefore, if cosmological observations in our vicinity allow us to determine the prevailing direction of rotation, that direction, reflected within the ramion, can likewise indicate whether a clockwise produces of a ramion corresponds to positive or to negative charge.

Photon is not merely an electromagnetic wave; macroscopic bodies may likewise be regarded as hypothetical quanta. Accordingly, both material quanta and photon are, in essence, waves rather than particles. Under certain observational conditions, however, they may be perceived and registered as particles.

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23.Photons and ħ in Ramionics

A single Ramion cannot act as a photon on its own, because it would have to change either its rotational speed or its direction of rotation, and it has no force to accomplish either. Consequently, the electric field generated by the rotation of the Ramion—and, on larger scales, as described by the Maxwell's equations—by its own rotation gives rise to a magnetic field. However, since this energy transfer ultimately proceeds in the form of Ramion quanta, it can be regarded as a quantum of energy, termed photon. The energy of this photon is similar to the hypothetical Coriolis force:

(160) $F = m(c) \times w$

(161) $E = m\,(rv) \times w = mrc\,w =$

$\hbar = mrc$ [reduced Planck constant] $\rightarrow E = \hbar\, w$ [For photon]

[For real Ramion] $\hbar\, c = mrc^2 = m\, c^2\, r = er$

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24.Elementary particles

Figure 2: Elementary particle table

In the ramion, not only the fine-structure constant but also the reason for the electric charges $0, \pm 1, \pm\frac{2}{3}$ or $\frac{1}{3}$, the matter–antimatter asymmetry, and the specific masses of the elementary particles are readily calculable.

With the Ramion theory, the dynamics of ramion (elementary-particle) reactions can likewise be modelled with the highest conceivable precision.

In space geometry we saw $L(n)=10n^2+2$=(number of ramions of layer n) and $T(n)=1+(10n^3+15n^2+11n)/3$=(number of ramions from centre to layer n).

Strong layers: When Ramions (means Energy) is converting to matter particles, it means some ramions collapse and explode their energy into space consequently but Strong Layers protect space network and universe against full collapsing.

Calculating them needs huge computers but Ramionics suggests easiest way:

They are most similar layers to real Sphere so:

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1-They are similar to layer 0 (solo centre) or 1(with 12 tangent Ramions) so their number is multiples of 12
2-They are similar to very large layers ($10n^2+2$) so their number is multiples of 10
So strong layers are 120K or 120/K
but very strong layers are:
$N_{Strong} = 120 \times 2^{2n}$; n: integer
Because Surface and volume grows proportional to 2^{4n} and 2^{6n} and torque (electrical charge) balance and distribution is repeat as previous generation easily. 6 is multiplier of 2 (for surface) and 3(for volume) so 2^{6n} is the best multiplier to copy stability of layer 120;
So we can expect baryon mass grows by g=generation as $2^{6n}=32^n$

Neutrinos are simple particles without electrical charge or any type of quark.
For example
N(4)=N309 ; T(4)=1+12+42+92+162
They are usually formed by collapsing layers 1 to n and making k neutrinos also they can be received or transmitted (radiated) in Ramionic reactions so they can have catalytic effect or start, relax (Temporarily reduce speed to complete some stages like electrical charges stabling) and finally balance energy then stop a Ramionic reaction.
Huge Black Hole are neutrino-type.
Neutrinos have wide range of mass and electrical charge free, short duration with electrical charge
Baryons have special range of mass and electrical charge free, short duration with electrical charge

We see one neutrino N(4) is generated with any EUD in the major Ramionic reaction. some of generated neutrino continues this reaction to more layers to convert B1 to NPE (Neutron proton electron) the others starts new reactions and remained neutrinos may be be radiated and even participate in Cosmic microwave Neutrino **CνB** or Cosmic microwave background **CMB.**

Layer 120 can't resist against collapsing Anyway collapsing continues until the next very strong layer 120*4=480

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After layer 120 process speed is very high and released energy can only saved as rotational energy (Magnetic energy) on neutron and proton (electron is ignored in our approximation because of less radius compared to proton and neutron.

Ramionics need no Energy or Force carrier or mass generator particle (like H boson) or Dark matter or Dark energy. all of them simply are explained by Ramions. Other particle may be wrong Interpretation or huge neutrino or complex particles. because in Ramionics we know 12 ramions around any particle hole have electrical charge even on Neutral particles so any particle can have 12 bond with other particles. In proton and neutron central particle uses only 2 bonds. Ramionics is compatible with QFD except that in Ramionics there is only one fluctuating field: Ramions,
Ramionics help QCD o do more effective calculation without gluon
Ramionic models space-time particles but real and 3 Dimensional.

Bosons can be neutrino, baryon, or complex particle (particle has 12 bonding capacity)
Boson layer estimation:
W: 60k−1 → n=1079 ،Δ%=+6.64 | 120k−1 → n=1079 ،Δ%=+6.64
Z: 60k−1 → n=1079 ،Δ%=−6.00 | 120k−1 → n=1079 ،Δ%=−6.00
H: 60k−1 → n=1199 ،Δ%=−6.19 | 120k−1 → n=1199 ،Δ%=−6.19
2W: 60k−1 → n=1319 ،Δ%=−2.62 | 120k−1 → n=1319 ،Δ%=−2.62
W+Z: 60k−1 → n=1379 ،Δ%=+4.26 | 120k−1 → n=1319 ،Δ%=−8.76
Z+H: 60k−1 → n=1499 ،Δ%=+6.10 | 120k−1 → n=1439 ،Δ%=−6.14
2W+Z: 60k−1 → n=1559 ،Δ%=+2.57 | 120k−1 → n=1559 ،Δ%=+2.57
W+Z+H: 60k−1 → n=1619 ،Δ%=−2.52 | 120k−1 → n=1679 ،Δ%=+8.72
3H: 60k−1 → n=1739 ،Δ%=−4.63 | 120k−1 → n=1799 ،Δ%=+5.58
2H+W: 60k−1 → n=1679 ،Δ%=−2.50 | 120k−1 → n=1679 ،Δ%=−2.50
3W: 60k−1 → n=1499 ،Δ%=−4.73 | 120k−1 → n=1559 ،Δ%=+7.17
2Z+2H: 60k−1 → n=1859 ،Δ%=+1.16 | 120k−1 → n=1799 ،Δ%=−8.32
W+3Z+2H: 60k−1 → n=2099 ،Δ%=+4.29 | 120k−1 → n=2039 ،Δ%=−4.40
W+4Z: 60k−1 → n=1859 ،Δ%=−1.58 | 120k−1 → n=1919 ،Δ%=+8.26
4W+2H: 60k−1 → n=2039 ،Δ%=+1.02 | 120k−1 → n=2039 ،Δ%=+1.02
5W+H: 60k−1 → n=1979 ،Δ%=+0.24 | 120k−1 → n=1919 ،Δ%=−8.60

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25.Cosmology and multiverse

In Ramin theory all elementary particles and forces, matter, Energy, , relativity and gravity are explained and formulated for everything (from the smallest particles to the largest black holes) siply and without singulariy.

For example primary galaxies are collapsing in ramionics lattice to very far layersuntil one of super strong layers can stop it. This explains why most of galaxies have a black hole with mass near to starts mass.

Ramionics presents these equations needed in cosmology

This theory models matter, dark matter, and waves by altering the arrangement of Ramions, and therefore only the energy of space must be taken into account in calculations of the age and dimensions of the Universe.

Studies based on this theory open many avenues concerning the expansion of the Universe, the Big Bang, and cosmology, in addition to relativity, quantum theory, and elementary particles.

In Ramion Theory all of universe is filled by Ramion, Ramion and space energy density is same even close to matter, so **maybe** we have to consider Dark energy (= Space energy density) share as 100% in calculation on Hubble constant H0, means 14.46×10^9 year Universe age and 14.46×10^9 LY observable radius.

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More about alpha 1/137…

1. Richard P. Feynman (1918–1988)

“There is a most profound and beautiful question associated with the observed coupling constant, $e^2/\hbar c$... It’s one of the greatest damn mysteries of physics: a magic number that comes to us with no understanding by man.”

2. Wolfgang Pauli (1900–1958)
“When I die, my first question to the Devil will be: What is the meaning of the fine-structure constant?”

3. Albert Einstein (1879–1955)
“The constant α has the value of about 1/137. Nobody knows why. It seems to be one of the greatest unsolved problems in physics.”

4. Max Born (1882–1970)
“If α were bigger than it really is, we should not be able to distinguish matter from ether... The fact that α has just its value 1/137 is certainly no chance but itself a law of nature.”

5. Paul Dirac (1902–1984)
“One could perhaps hope that the fine-structure constant will one day be explained by a fundamental theory, but at present it remains an empirical mystery.”

6. John Archibald Wheeler (1911–2008)
“Why do these constants of nature come together to make the particular number 1/137.036 and not some other number?”

7. Freeman Dyson (1923–2020)
“The number 137 comes in at so many levels of physics that it cannot be coincidence.”

8. Arthur Stanley Eddington (1882–1944)
“The fine-structure constant is really the ratio of two natural units of action... Its significance reaches into the structure of the universe itself.”

9. Steven Weinberg (1933–2021)
“The fine-structure constant sets the strength of electromagnetic interactions. Were it much different, chemistry and life as we know it would be impossible.”

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10. Murray Gell-Mann (1929–2019)
“We can calculate many things, but we do not calculate the fine-structure constant. It simply exists.”

11. Sheldon L. Glashow (1932–)
“The Standard Model contains 17 particles and about the same number of arbitrary constants, among them the fine-structure constant—this is deeply unsatisfying.”

12. Julian Schwinger (1918–1994)
“It would be a triumph of theoretical physics to derive α from first principles.”

13. Enrico Fermi (1901–1954)
“No one knows what determines the value of α, and until we do, physics will not be complete.”

14. Niels Bohr (1885–1962)
“In the fine-structure constant we meet a number that appears to set the scale of all electromagnetic phenomena.”

15. Hendrik Lorentz (1853–1928)
“The fine-structure constant connects the worlds of mechanics, electromagnetism, and quantum theory in a single dimensionless number.”

16. Max Planck (1858–1947)
“Every dimensionless constant of nature hides a mystery; α is the deepest of them all.”

17. Werner Heisenberg (1901–1976)
“When I see the fine-structure constant, I get the feeling that God is telling us: ‘You will never understand me completely.’”

18. John D. Barrow (1952–2020)
“If we could explain α, we might explain why the universe allows life.”

19. Frank Close (1945–)
“Without the value of α, the periodic table could not exist.”

20. George Gamow (1904–1968)
“God made the integers; all else is the work of man—except perhaps the fine-structure constant.”

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21. Lev Landau (1908–1968)
“α is one of those constants that will be understood only when we have a unified field theory.”

22. Brian Greene (1963–)
“The fine-structure constant ties the threads of electromagnetism and quantum mechanics together.”

23. Sean Carroll (1966–)
“There’s a hint that 1/137 is more than coincidence; it’s a whisper of deep mathematical structure in the fabric of the cosmos.”

24. Michio Kaku (1947–)
“To a physicist, α is a key that might unlock the ultimate theory of everything.”

25. Lisa Randall (1962–)
“We often wonder why the constants of nature are what they are. The fine-structure constant remains the most tantalizing.”

26. Roger Penrose (1931–)
“The number α has a precision that seems to be woven into the structure of space-time.”

27. Kip Thorne (1940–)
“α is a reminder that nature speaks mathematics far beyond our intuition.”

28. Edward Witten (1951–)
“In string theory, α appears naturally, yet we still do not know why it takes its specific value.”

29. Leonard Susskind (1940–)
“Every attempt to explain 1/137 ends in more questions—it’s like nature’s own riddle.”

30. Stephen Hawking (1942–2018)
“If the fine-structure constant had been only slightly different, life would not have appeared in the universe.”

31. Martin Rees (1942–)
“The fine-structure constant is one of the six numbers that determine the essential features of our universe.”

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32. Paul Davies (1946–)
“α is one of those fingerprints of the cosmos that seem tuned for life.”

33. Frank Wilczek (1951–)
“1/137 is nature’s most famous mystery number.”

34. George Smoot (1945–)
“The constant α tells us how light and matter talk to each other.”

35. Carlo Rovelli (1956–)
“The fine-structure constant bridges quantum mechanics and the structure of space-time.”

36. John Polkinghorne (1930–2021)
“The values of constants like α look astonishingly designed for a universe of complexity.”

37. Brian Cox (1968–)
“If we ever find why α equals 1/137, we’ll glimpse the handwriting of the universe.”

38. Sabine Hossenfelder (1976–)
“The fine-structure constant is not just a number—it’s a measure of our ignorance.”

39. Peter Higgs (1929–)
“We can measure α with extraordinary accuracy, yet we don’t know why it is what it is.”

40. Lawrence Krauss (1954–)
“Maybe someday a deeper theory will tell us why the universe chose 1/137 instead of 1/138.”

41. Lisa Meitner (1878–1968)
“In α we see the unity of matter, light, and quantum action.”

42. Heinz Pagels (1939–1988)
“The fine-structure constant is one of the signatures of God in the equations of physics.”

43. Carl Sagan (1934–1996)
“Maybe 1/137 is the cosmic password for intelligent life.”

44. James Peebles (1935–)
“Without the exact value of α, stars would neither shine nor last.”

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45. Richard Muller (1944–)
“1/137 is the most remarkable number because it unites three worlds: relativity, quantum mechanics, and electromagnetism.”

46. Leonard Susskind (1940–)
“The fine-structure constant will be the Rosetta stone of fundamental physics.”

47. Michael Duff (1949–)
“If any number deserves the title ‘cosmic constant,’ it’s 1/137.”

48. John Baez (1961–)
“The fine-structure constant is like nature’s way of saying: mathematics and physics are married forever.”

49. Freeman Dyson (1923–2020)
“It’s not unreasonable to think α might be the fingerprint of a deeper mathematics behind physics.”

50. Arthur Eddington (1882–1944)
“Perhaps the universe is not only queerer than we suppose, but queerer in a way dictated by 137.”

51. David Bohm (1917–1992)
“The constancy of α suggests that the universe maintains an inner coherence through all its transformations.”

52. Hermann Weyl (1885–1955)
“The appearance of α in quantum theory is no accident—it reflects the harmony between the continuum and the discrete.”

53. Abdus Salam (1926–1996)
“The fine-structure constant might be the bridge between quantum electrodynamics and cosmology.”

54. Ilya Prigogine (1917–2003)
“The number 1/137 belongs to the same family of constants that make order possible in chaos.”

55. Eugene Wigner (1902–1995)
“The unreasonable effectiveness of mathematics may find its cause in numbers like 1/137.”

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56. Philip Anderson (1923–2020)
“α is the most experimental of constants and the most philosophical of numbers.”

57. Yakov Zel'dovich (1914–1987)
“The value of α is not arbitrary; it is a cosmological signature.”

58. Bryce DeWitt (1923–2004)
“The fine-structure constant could be the link between quantum gravity and ordinary matter.”

59. Max Tegmark (1967–)
“If mathematics is the language of the universe, α is one of its first syllables.”

60. Andrei Sakharov (1921–1989)
“The fine-structure constant defines the possibility of complexity in the universe.”

61. Gerard ’t Hooft (1946–)
“α represents a fundamental symmetry that our theories have not yet captured.”

62. Edward Teller (1908–2003)
“To change α would be to rebuild the cosmos from its foundation.”

63. John Wheeler (1911–2008)
“In α, the universe reveals a deep design of self-consistency.”

64. Freeman Dyson (1923–2020)
“The question of α’s origin is a meeting point of physics and metaphysics.”

65. Sean Carroll (1966–)
“Perhaps α is not a constant at all, but a conversation between time and the laws of nature.”

66. Lisa Randall (1962–)
“The fine-structure constant may be the universe’s way of balancing elegance and necessity.”

67. Roger Penrose (1931–)
“The fine-structure constant might one day lead us to the mathematical soul of reality.”

68. Frank Wilczek (1951–)

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“When we understand α, we will have taken the first step toward knowing why there is something rather than nothing.”

69. Freeman Dyson (1923–2020)
“α is the fingerprint of creation written into the equations of light.”

70. Richard Feynman (1918–1988)
“All the mathematics in the world would be meaningless without that little number, 1/137.”

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